

Replacement
Instructions

hp StorageWorks MSA1000/500 Chassis

These instructions apply to the MSA1000/500 product families. The part may also be used in other HP products. Please refer to documentation for your specific product for detailed replacement instructions.



If the product in which this part is being replaced is still under HP warranty, then the replacement part(s) referred to in these Replacement Instructions is provided under the terms and conditions of the Hewlett-Packard Company Limited Warranty for that product. A copy of this limited Warranty may be viewed at: <http://h18006.www1.hp.com/products/storageworks/warranty.html>

If this is a trade sale part (product out of warranty), then the replacement part(s) referred to in these Replacement Instructions is provided under HP's express limited warranty statement, which may be viewed at: http://customerops.corp.hp.com/1sw/pdm_om/warranty_support/policies/2330100.doc

The replacement part takes on either the Limited Warranty Period of the part being replaced or a ninety-day period that begins upon installation of the replacement part, whichever is greater.

The information contained on these replacement instructions is subject to change without notice. The only warranty for this replacement product is as noted above. Nothing in these replacement instructions should be construed as constituting an additional warranty. The information provided in these replacement instructions is provided "AS IS" and HP is not liable for technical or editorial errors or omissions contained herein.

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MSA1000/500 Chassis Replacement Instructions
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About this document

This document details the procedures for replacing a failed MSA1000/500 chassis for HP StorageWorks Modular Smart Array (MSA) storage systems.

Before you begin

Read the following cautions and information before beginning removal and replacement procedures.

Caution: Parts can be damaged by electrostatic discharge. Use proper anti-static protection. Refer to the documentation that shipped with your system for additional information.

Caution: It is important to follow these instructions when replacing components in the MSA1000/500. If the procedure is done improperly, it is possible to lose data or damage equipment.

Caution: Before replacing this component ensure that steps have been taken to prevent loss of data.

Note: Before replacing the chassis it is important to stop all system access (for example, application, system I/O or RAW device file path/s) to the device.

Note: Retain the packing materials of the spare chassis to return the faulty chassis.

Weight warning

WARNING: The MSA1000/500 weighs 50 pounds (22.7 kilograms) when fully assembled. To reduce the risk of personal injury or damage to equipment:

- Observe local health and safety requirements and guidelines for manual material handling.
- Obtain adequate assistance to lift and stabilize the MSA1000/500 during installation or removal.
- Remove all tape drives and blower assemblies/power supplies to reduce the overall weight of the library.

Removing the components from the failed chassis

Step 1: Preparing the MSA1000/500 for chassis replacement

1. Power off the MSA1000/500.

Note: Before disconnecting any cables, label all cables. This ensures their reconnection in the correct configuration.

Caution: Use appropriate precautions when handling Fibre Channel cables:

- Touching the end of a Fibre Channel cable will either damage the cable or cause performance problems, including intermittent difficulties accessing the storage.
- Whenever a Fibre Channel cable is not connected, replace the protective covers on the ends of the cable.

2. Disconnect the power cables.
3. Disconnect the fibre cables. (MSA1000 only)
4. Disconnect the SCSI cables.
5. Remove the MSA1000/500 from the rack.

Step 2: Removing the hot-plug hard drives

Caution: Label the hard drives so they can be reinstalled in their original positions. Failure to retain the same configuration can result in loss of data.

1. Press the ejector ❶ and pivot the lever ❷ to full open position.
2. Pull the drive completely out of the storage system drive bay ❸.

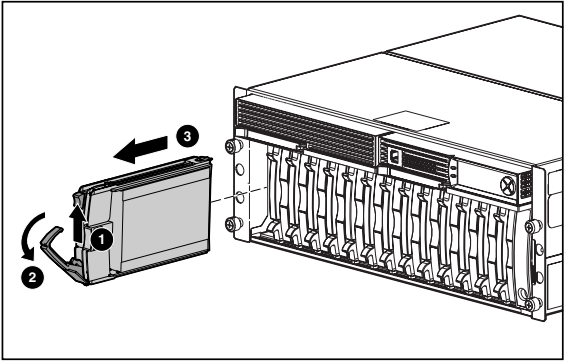


Figure 1: Removing an MSA1000/500 hot-plug hard drive

Step 3: Removing the hard drive blanks

1. Push the tabs to unlock the MSA1000/500 hard drive blank ❶.
2. Continue to press the tabs while sliding the MSA1000/500 hard drive blank out of the drive cage ❷.

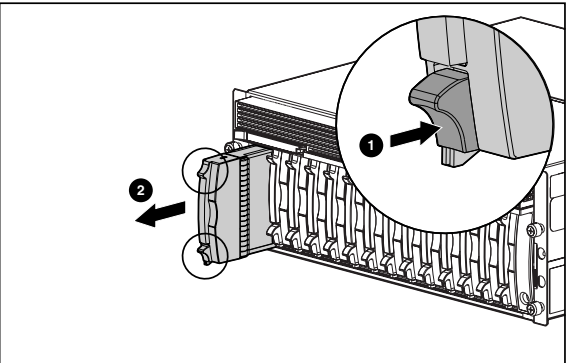


Figure 2: Removing an MSA1000/500 hard drive blank

Step 4: Removing the Fibre Channel I/O module (MSA1000 only)

1. Slide the port-colored release latch to the right ❶.
2. Slide the Fibre Channel I/O module straight out ❷.

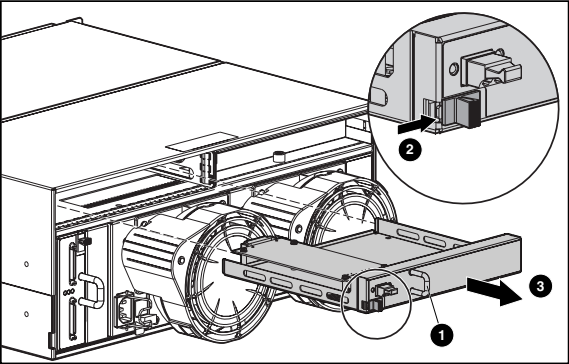


Figure 3: Removing the Fibre Channel I/O module

Step 5: Removing the SCSI I/O module

1. Press the port-colored SCSI I/O latch down ❶.
2. Slide the SCSI I/O module straight out ❷.

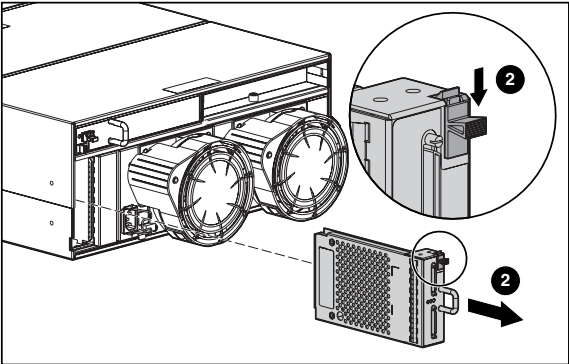


Figure 4: Removing the SCSI I/O module

Step 6: Removing the power supply

1. While pushing up the power supply port-colored module latch ❶, pull the power supply out of the enclosure ❷.

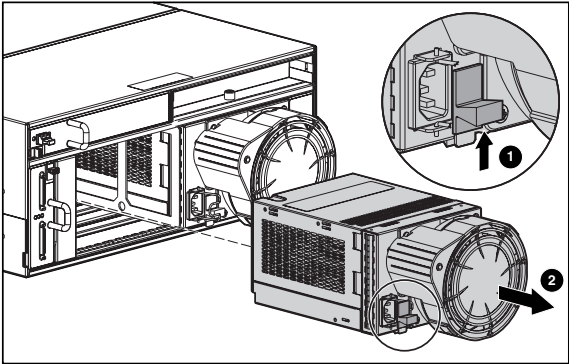


Figure 5: Removing the power supply

2. Repeat for the redundant power supply.

Step 7: Removing the controller

- 1. Press the thumb latch and rotate the latch handle out ❶.
- 2. Pull the controller straight out of the chassis ❷.

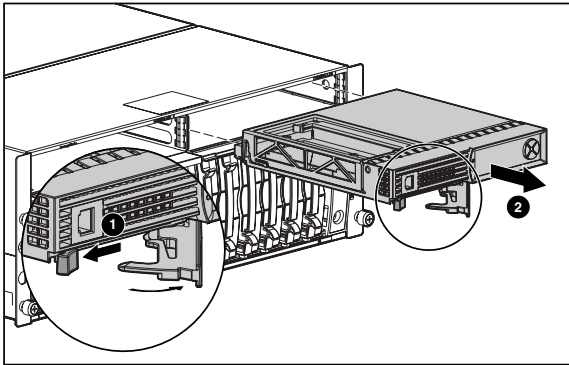


Figure 6: Removing the controller

- 3. Repeat for the redundant controller, if installed.

Installing components in the new chassis

After all of the components have been removed from the failed chassis, they must be installed in the replacement chassis.

Step 8: Installing the controller

- 1. Insert the controller into the chassis.
- 2. Push the controller in as far as it will go ❶ and press the latch inward until it is flush against the front panel ❷.

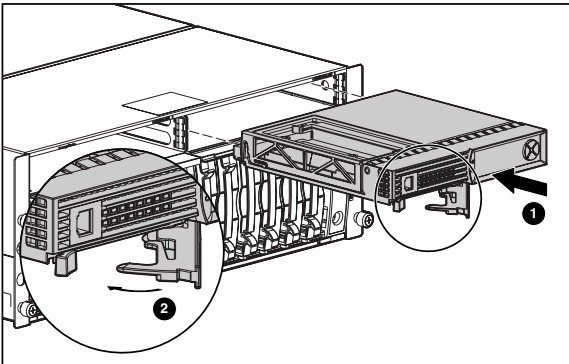


Figure 7: Installing the controller

- 3. Repeat for the redundant controller, if needed.

Step 9: Installing the power supply

- 1. Remove any connector protector that may be covering the power connector on the front of the new power supply.
- 2. Install the power supply by pushing the power supply module latch up ❶ and pushing in the base until the assembly is fully seated in the enclosure ❷.

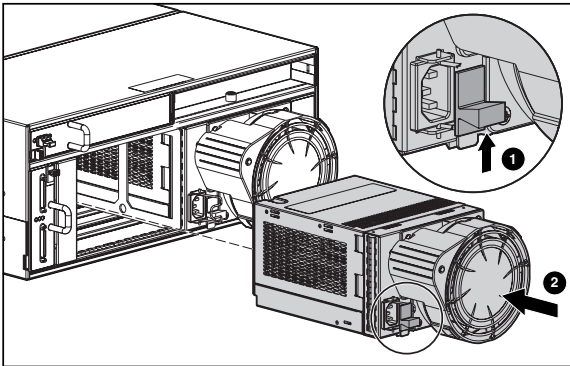


Figure 8: Installing the power supply

- 3. Repeat for the redundant power supply.

Step 10: Installing the SCSI I/O module

Slide the SCSI I/O module into the bay until it clicks into place.

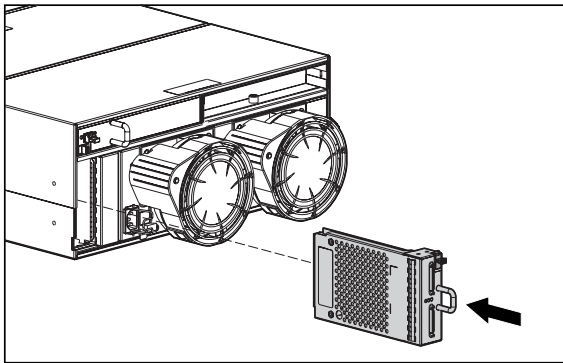


Figure 9: Installing the SCSI I/O module

Step 11: Installing the Fibre Channel I/O module (MSA1000 only)

To install the Fibre Channel I/O module, slide the Fibre Channel I/O module into the bay until it clicks into place.

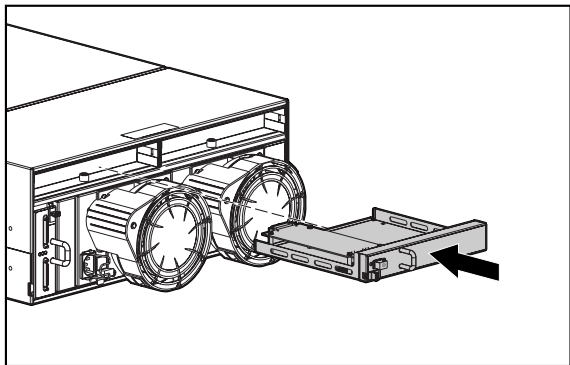


Figure 10: Installing the Fibre Channel I/O module

Step 12: Installing the hot-plug hard drives

- 1. Insert the new drive into the same bay as the drive just removed, sliding it in as far as it will go ❶ with the ejector lever in the full open position to ensure a correct latch.
- 2. Close the ejector lever against the front of the drive ❷.

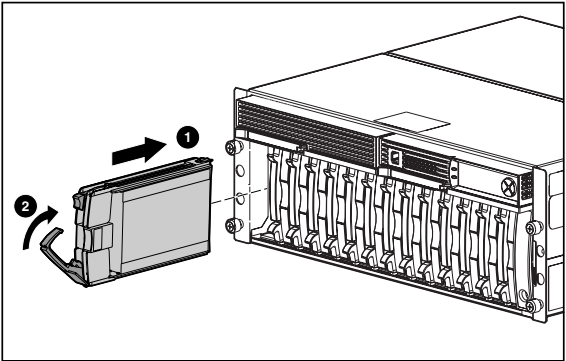


Figure 11: Installing an MSA1000/500 hot-plug hard drive

Step 13: Installing hard drive blanks

Install hard drive blanks in any empty drive bays to ensure proper airflow in the chassis.

Step 14: Completing the MSA1000/500 chassis replacement

- 1. When finished, write the serial number, shown on the original chassis, on the label of the replacement chassis ❶, located in the area shown in Figure 12.

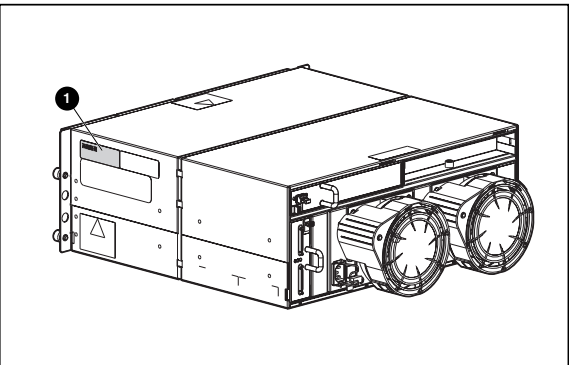


Figure 12: Replacement chassis serial number label location

- 2. Reinstall the MSA1000/500 in the rack.
- 3. Reconnect the fibre cable. (MSA1000 only)
- 4. Reconnect the SCSI cables.

Note: After reconnecting all data cable to the MSA1000/500, make sure that all of the connections are tight and that the cables have been reconnected in the same configuration as the original configuration before replacing the chassis.

- 5. Reconnect the power cables.
- 6. Power on the MSA1000/500.

Verifying the replacement

After replacing the failed chassis verify that:

- No error messages are displayed on the LCD.
- The power LED is solid green.
- The heartbeat LED is flashing green.

Returning the failed component

Please follow the return instructions provided in the new component package.

Additional information

For additional information, refer to the MSA technical documents web sites at the following locations:

MSA1000

<http://www.hp.com/go/MSA1000>

MAS500

<http://www.hp.com/go/MSA500>